COLORADO
Division of Reclamation, Mining and Safety
Department of Natural Resources

1313 Sherman Street, Room 215
Denver, CO 80203

February 15, 2019

Mr. Perry Hastings
Ellicott Sand and Gravel, LLC
235 Franceville Coal Mine Road
Colorado Springs, CO 80929

Re: Schubert Ranch Sand Resource, Permit No. M-2018-063; Preliminary Adequacy Review for 112 Construction Materials Reclamation Permit Conversion Application Package

Dear Mr. Hastings:

The Division of Reclamation, Mining and Safety (DRMS) has completed its preliminary adequacy review of your 112 Construction Materials Reclamation Permit Conversion Application package for the Schubert Ranch Sand Resource, Permit No. M-2018-063. The application was received on December 4, 2018 and called complete for review on December 14, 2018. **The decision date for this application is March 14, 2019**. Please be advised that if you are unable to satisfactorily address any concerns identified in this review before the decision date, **it will be your responsibility to request an extension of the review period.** If there are outstanding issues that have not been adequately addressed prior to the end of the review period, and no extension has been requested, the DRMS may deny this application.

The review consisted of comparing the application content with specific requirements of Rules 3.1, 6.4 and 6.5 of the Minerals Rules and Regulations of the Colorado Mined Land Reclamation Board for the Extraction of Construction Materials. Any inadequacies are identified under the respective exhibit heading along with suggested actions to correct them.

The following items must be addressed by the applicant in order to satisfy the requirements of C.R.S. 34-32.5-101 et seq. and the Mineral Rules and Regulations of the Mined Land Reclamation Board:

APPLICATION

1. Item 10, p. 2: Primary Mine Entrance Location. The longitude provided for the entrance location (104° 21’ 15.94”) does not match the entrance location longitude shown on Map Exhibit B (104° 21’ 17.60”). These locations should be consistent. Please make corrections to the pages with errors and resubmit the corrected page(s).

6.4 SPECIFIC EXHIBIT REQUIREMENTS – REGULAR 112 OPERATIONS

6.4.3 EXHIBIT C - Pre-mining and Mining Plan Map(s) of Affected Lands

2. Potential stream capture: Map Exhibit C-1 (along with Map Exhibit F) shows nearly the entire proposed pits appear to be within the 100-year floodplain. The DRMS is concerned that a 100-year flood event would erode highwalls next to the Black Squirrel Creek and Big Springs Creek; and as the pits are significantly deeper than the stream invert (perhaps as much as 60 feet), the streams would be captured by the pit and have no way to drain downstream. Pursuant to Rule 3.1.6, please describe how stream capture is to be avoided.

3. Haul/Access Roads: Map Exhibit C-1 shows multiple access/haul roads crossing both Black Squirrel Creek and Big Springs Creek. Access and haul roads are considered affected area. The DRMS requires engineering designs based upon appropriate hydrologic and hydraulic analyses for these crossings. Please provide engineering designs and analyses to support the crossing design(s) pursuant to Rule 3.1.6.

6.4.4 EXHIBIT D – Mining Plan

4. Mining Setbacks: The mining plan (pp. 5 – 6) states there will be setbacks of various distances form structures, ephemeral drainages, and boundaries. These setbacks, if approved by the DRMS, will be critical to preventing offsite impacts. Please provide details as to how these setbacks will be marked such that they are visible to mine equipment operators.

5. Setbacks and Grading: The end of the second paragraph on page 6 describes a 55-foot wide vertical mining setback to leave enough material to create the 3:1 cut/fill slope. Is the intent to push material down or push material up to create this 3H:1V slope?

6. Topsoil Stockpile Location: The third paragraph on page 6 indicates topsoil may be stockpiled below grade such that it is screened below the surrounding areas. Should the pit flood during a 100-year event, the DRMS is concerned the flood waters might disperse the topsoil throughout the pit, making redistribution of this material for reclamation impractical to impossible. Pursuant to Rule 3.1.9(1) please discuss why a below grade stockpile is preferred under these circumstances.

7. Buildings: The first paragraph on page 8 discusses a shop and maintenance building. No mention of demolition/removal of these buildings is included in either the reclamation plan (Exhibit E, Rule 6.4.5(2)(c)) or the reclamation cost estimate (Exhibit L). If these buildings are to remain, please provide justification; otherwise include their demolition/removal in both Exhibits E and L (Rules 3.1.11 and 6.4.12).

8. Ephemeral Drainages: The second paragraph on page 8 states the ephemeral drainages will not be disturbed by mining. Map C-1 shows mining to extend very near the Black Squirrel Creek and Big Spring Creek drainages. Furthermore, most of the mining is planned to be within the delineated 100-year floodplains. The DRMS is concerned that a 100-year flood event would erode the highwall next to the stream and as the pit is deeper than the stream invert, the stream would be captured by the pit and have not way to drain back into the drainage system. Pursuant to Rule 3.1.6, please describe how stream capture, considered disturbance to the drainage and the hydrologic balance, is to be avoided.

9. Area Discrepancy: The total area at the bottom of the third column in the "Estimated Mining Timetable" (p. 9) is listed as 733.87 acres, 0.17 acres greater than the 733.7 acres used throughout the application and other discussions in the Exhibits. Please correct this table to present consistent acreages in order to prevent future confusion.

10. Figure D-1: Some clarification is required for Figure D-1 (p. 10): These cross sections appear specific, given the elevations, yet the DRMS could not find locations in Exhibits C or F to indicate where these sections are taken. Please indicate where these sections on Figure D-1 are on the appropriate map(s) in Exhibits C and/or F. Also, the date on Figure D-1 is 2009. Given the dates on 2018 Exhibits C and F are 2018, is there a newer version of Figure D-1?

6.4.5 EXHIBIT E – Reclamation Plan

11. Revegetation commitment: The Second paragraph commits to returning the mined areas to at least their present vegetative condition. Although this is a commendable goal, it is unlikely to be achieved in the five-year reclamation period sought by the DRMS. Please explain what additional methods will be used to establish a mature vegetative cover within five years.

12. Seed Mix: Exhibit J indicates a significant amount of Blue Grama is present in the area, but this species is not listed in the "Non-irrigated grass seed recommendation" table on page 14. What is the source of the grass seed recommendations and why is blue grama not included?

13. Post-Reclamation site drainage: Rule 6.4.5(2)(c) requires the Applicant to explain how the reclamation plan meets the requirements of Rule 3.1.5(1). Appropriate final grading topography and Rule 3.1.6(1), disturbance to the prevailing hydrologic balance do not appear to be adequately addressed. The proximity of highwalls shown on the referenced Exhibit F Map which extend below the thalweg of the adjacent ephemeral drainage and which are in the 100-year floodplain is likely to have an significant impact on the hydrologic balance should a flood overtop the highwall crest. Please discuss how stream capture by the pit will be protected.

6.4.6 EXHIBIT F – Reclamation Plan Map

14. Proposed topography: There are no adequacy issues with Exhibit F other than the concerns the proposed final topography has on potential groundwater exposure and stream capture discussed in comments under Exhibits C, D, E and G in this letter. Please make appropriate changes to Exhibit F based on responses to these other comments.

6.4.6 EXHIBIT G – Water Information

15. Division of Water Resources (DWR): Given the unique situation related to the proposed deep excavations (70 feet) and large area adjacent to and in the floodplain of both Black Squirrel Creek and Big Springs Creek, the DRMS consulted with the DWR on potential impacts to the hydrologic balance. DWR responded stating the proposed mine is within the Upper Black Squirrel Creek Designated Basin and the Colorado Ground Water Commission (GWC) will require any captured runoff to be released within 72 hours of capture or the mine will need a GWC approved replacement plan to offset the evaporative losses. Furthermore, with a

proposed depth of 70 feet, the excavation would intercept groundwater in that area. If that occurs, they would need a well permit and replacement plan. Please address the following:

a. How is any captured stormwater (this includes flood flows) to be released in 72 hours; both during operations and post reclamation (Note: the DRMS believes there is a significant chance during a 100-year flood or greater, that the full build out of the proposed pits could capture more than 30,000 acre-feet of water).

b. Commit to getting the necessary well permit and water replacement plan for exposed groundwater.

16. Depth of mining vs. groundwater: The apparent discrepancy between well depths and groundwater elevation is alluded to in the first and second paragraphs on page 19. The first paragraph states there are five wells completed at less than 70 feet. The second paragraph states 24 wells are over 80 feet deep, but does not fully address the five wells completed at less than 70 feet below grade. Please address the water level in the remaining four wells that are completed at a depth less than the proposed 70-foot mining depth.

17. Affecting Drainages: The end of the third paragraph on page 19 states the plan is to maintain a 50-foot setback from the top of the bank of both ephemeral drainages in order to prevent these drainages from being affected by mining. Given the proposed pits are 70 feet deep and in the floodplain, the DRMS anticipates during a significant flood, flood waters will erode and headcut the material in a 50-foot setback, allowing the pit(s) to capture flows in the ephemeral drainages. Pursuant to Rule 3.1.6, please provide a scour analysis or armored bank protection designs to ensure this does not occur.

6.4.8 EXHIBIT H – Wildlife Information

18. CPW Declined to Comment: The first paragraph on page 23 indicates Colorado Parks and Wildlife (CPW) declined to provide a wildlife statement as they do not provide the service as outlined in Rule 6.8.4(1) of Minerals Rules and Regulations of the Colorado Mined Land Reclamation Board for the Extraction of Construction Materials. Are you able to provide documentation for this response?

6.4.10 EXHIBIT J – Vegetation Information

19. Haul/Access Roads: The second paragraph discusses road crossings through the ephemeral drainages. Please see Comment No. 3 above with respect to road crossing designs.

6.4.12 EXHIBIT L – Reclamation Costs

20. Reclamation costs: The DRMS will estimate a bond based on your responses to the adequacy comments herein after they are received.

6.4.14 EXHIBIT S – Permanent Man-made Structures

21. Structure Agreements: Exhibit S appears to demonstrate all necessary structure damage compensation agreements were mailed. No signed or returned damage compensation agreements have been received to date. If all damage compensation agreements are not signed,

returned and copies provided to the DRMS, engineering evaluations pursuant to Rule 6.4.19, will be required to demonstrate these structures shall not be damaged by the proposed mining activities.

22. Wells: Exhibits F and G combined indicate eight wells will be either completely or partially mined through. The DRMS requires acknowledgement and acceptance of this from each well owner.

6.5 GEOTECHNICAL STABILITY EXHIBIT

23. Geotechnical Stability Exhibit: Given the depth of the proposed pits and location within the floodplain, the DRMS requires engineering stability analyses (for both saturated and rapid drawdown conditions – given the highwalls are in the floodplain) for structures (houses, fences, roads, etc.) within 200 feet of the highwall crests.

Please remember that the decision date for this application is March 14, 2019. As previously mentioned if you are unable to provide satisfactory responses to any inadequacies prior to this date, it will be your responsibility to request an extension of time to allow for continued review of this application. If there are still unresolved issues when the decision date arrives and no extension has been requested, the application may be denied. If you have any questions, please contact me at (303) 866-3567, ext. 8169.

Sincerely,

Timothy A. Cazier, P.E.
Environmental Protection Specialist

Enclosures – Agency comments

ec: DRMS file
Steve O'Brian, Environment, Inc